PRODUCT BULLETIN

Configuring Onyx to print on your HEXIS media

CONTENTS

HEXIS®

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On www.hexis-graphics.com/en, HEXIS provide you with free-download profiles for your printing media and your «machine» configurations (printer-ink-colours and RIP).

A *media profile* contains:

- **Certain printer parameters adapted to the media, like heating temperature, suction, etc.**

- **A calibration of ink quantities applied to the printing media** which allows optimal use of the ink consumption while maintaining the largest possible reproducible range of colours.

- **An ICC profile** which characterises the **colorimetric response of the printing system**.

What to expect from this media profile?

- A media profile **optimises the printing quality** on a media to **accurately print colours** and **to control the quantity of inks used**.

- Caution! A media profile is only valid for a **given printing configuration RIP - Printer - Ink - Printing mode**.

- Certain media-related printer settings cannot be included in the media profile. It is **imperative to realise them to obtain a nice printing quality** (feed calibration, bidirectional adjustment). See Product Bulletin No.2.

- The profiles downloadable from our website are called «**generic**» because they were not realised directly on your printer. Even for an identical model, there are **differences** from one printer to another. For greater colorimetric accuracy, the profile must be realised **directly on your printer**, or at least be **relinearised**.

Product Bulletins being already available:

- **FPT.IMN.001**: **How to carry out quality prints on your HEXIS digital printing media**

- **FPT.IMN.002**: **Setting up your printers according to your HEXIS media**

- **FPT.IMN.003**: **Introduction to colour management**

1. Installing a media profile suitable for your HEXIS printing media in Onyx

1.1.Downloading the media profile

1. Log in to our HEXIS website: http://www.hexis-graphics.com/en

2. Under the «**Professionals**» tab, select «**ICC profiles**».
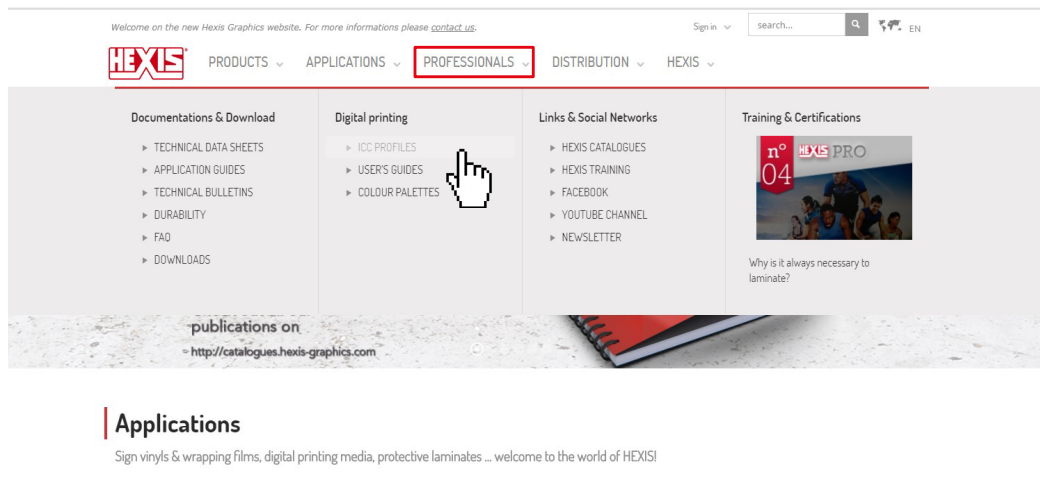
3. Fill in **the configuration of the printing system used** and then click SEARCH.
   (The fields «Models», « Inks », « Colour code» and «RIP» are mandatory.)
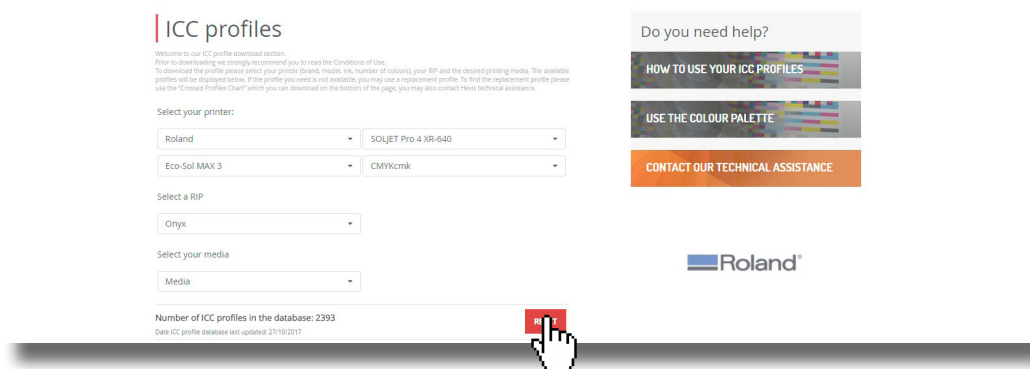
If your machine configuration is not listed, contact the Printing Division department at the following address:
http://www.hexis-graphics.com/en/supports/impression-numerique/contact-support-technique/

4. Identify the media group (200 series, 3000 series, etc.) for which you want an ICC profile or directly select the desired media from the drop-down list.

If the profile for your media is not listed, see the **Crossed profiles** tab to find a replacement profile.
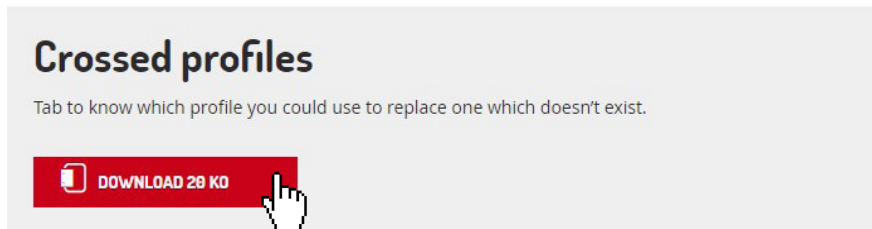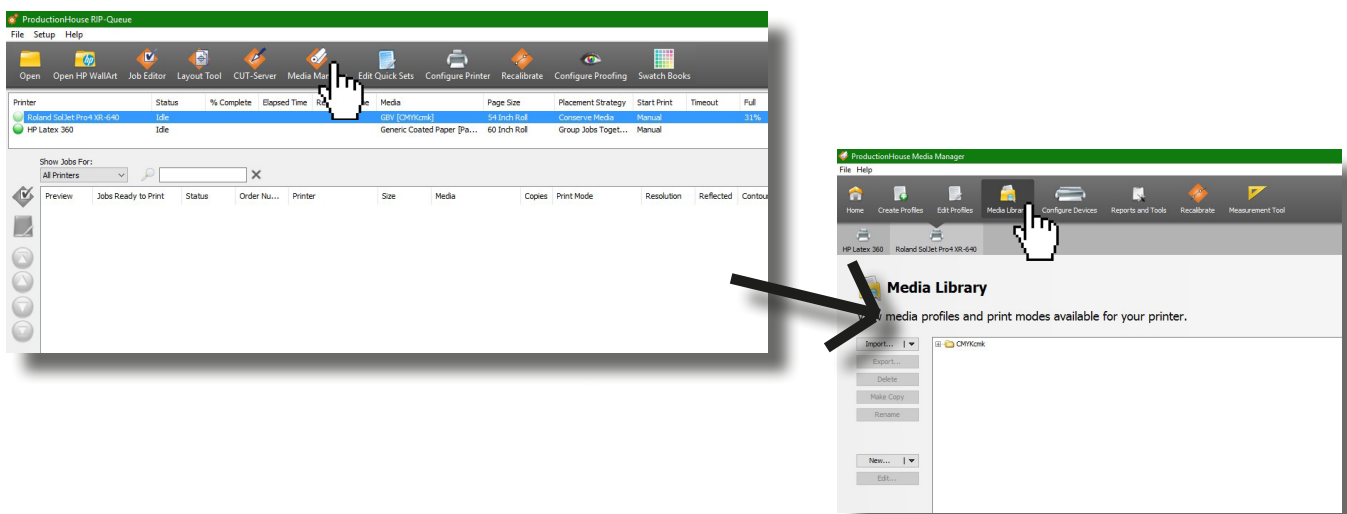

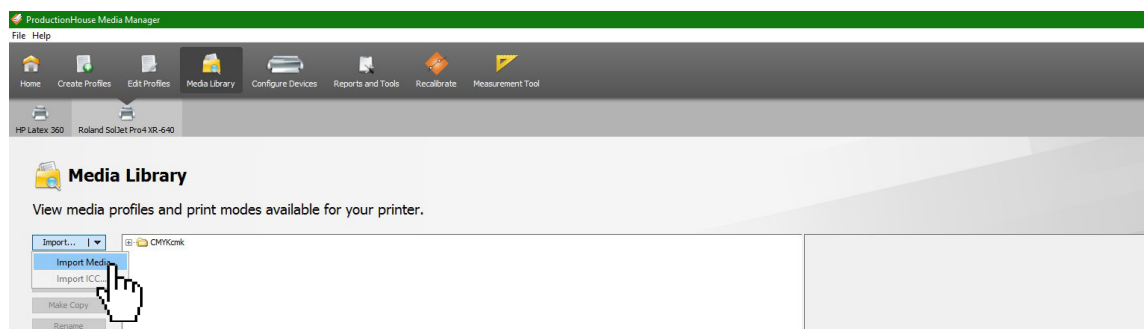5. Click the «**Download**» button.

If you encounter any problems when downloading a HEXIS profile, please feel free to contact the assistance department by e-mail at the following address: assistance@hexis.fr
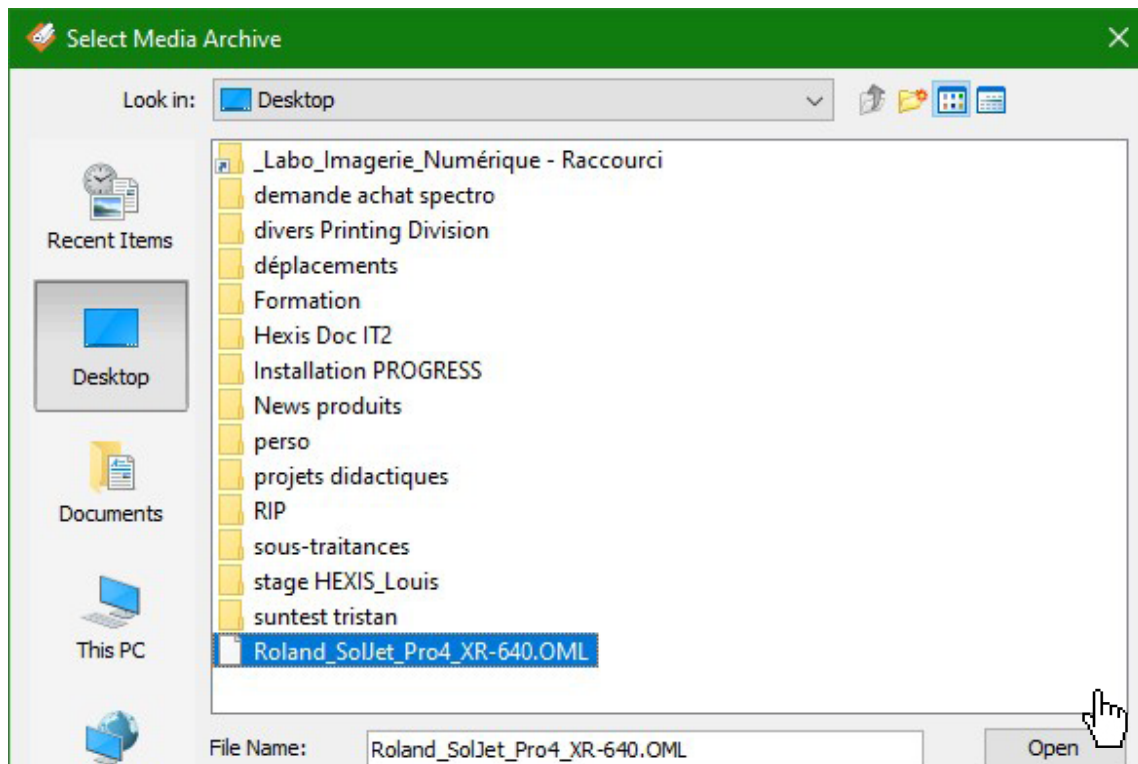
1.2.Importing the media profile into Onyx

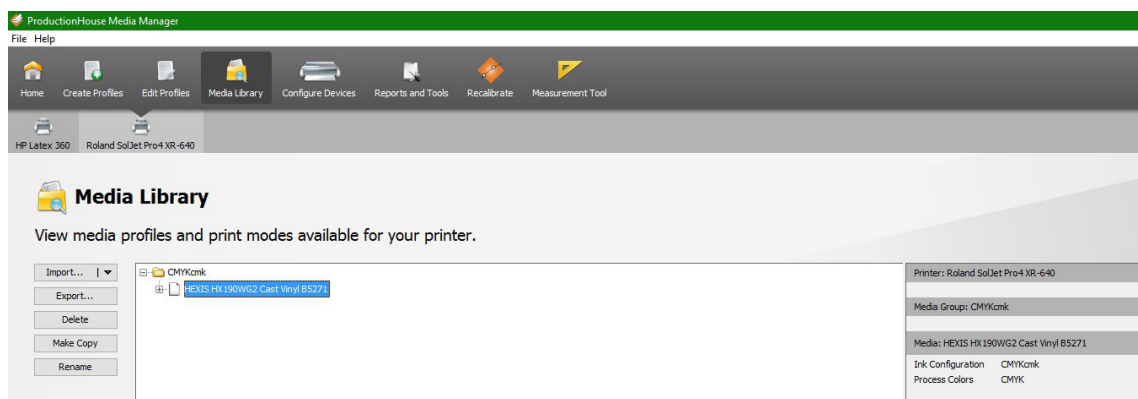1. Open **Media Manager**, then «**Media Library**».

2. Click the «**Import**» button, then «**Import Media**».

3. **Select the file obtained** from the HEXIS site (profile format: .oml). In order to facilitate its download, it is possible that the downloaded item is in compressed form. In this case, **decompress** it.

4. Click the «**Open**» button.

5. Check if the media has been **imported**.

In the case of **importing problems**, please refer to the **Digital Printing F.A.Q**, available on the HEXIS website at the following address:
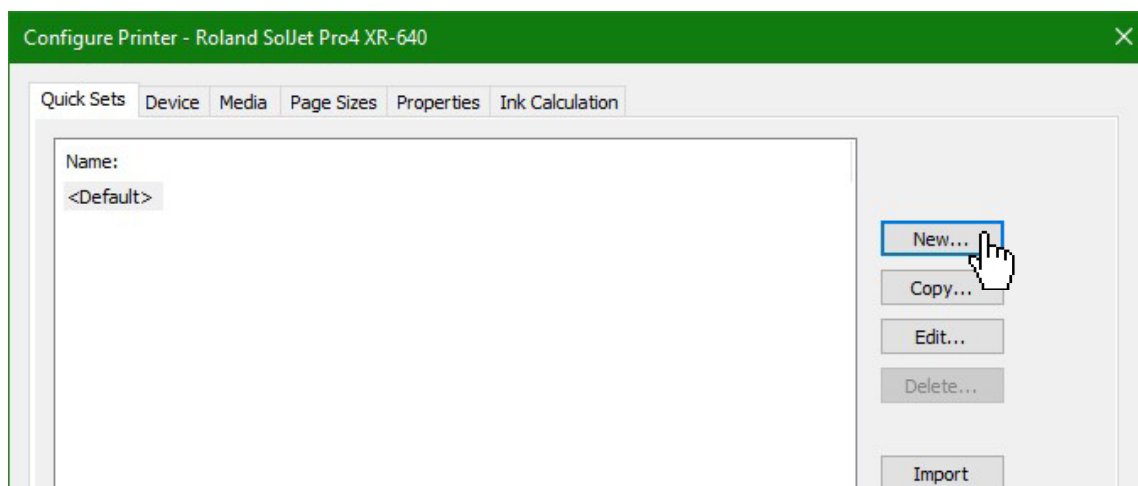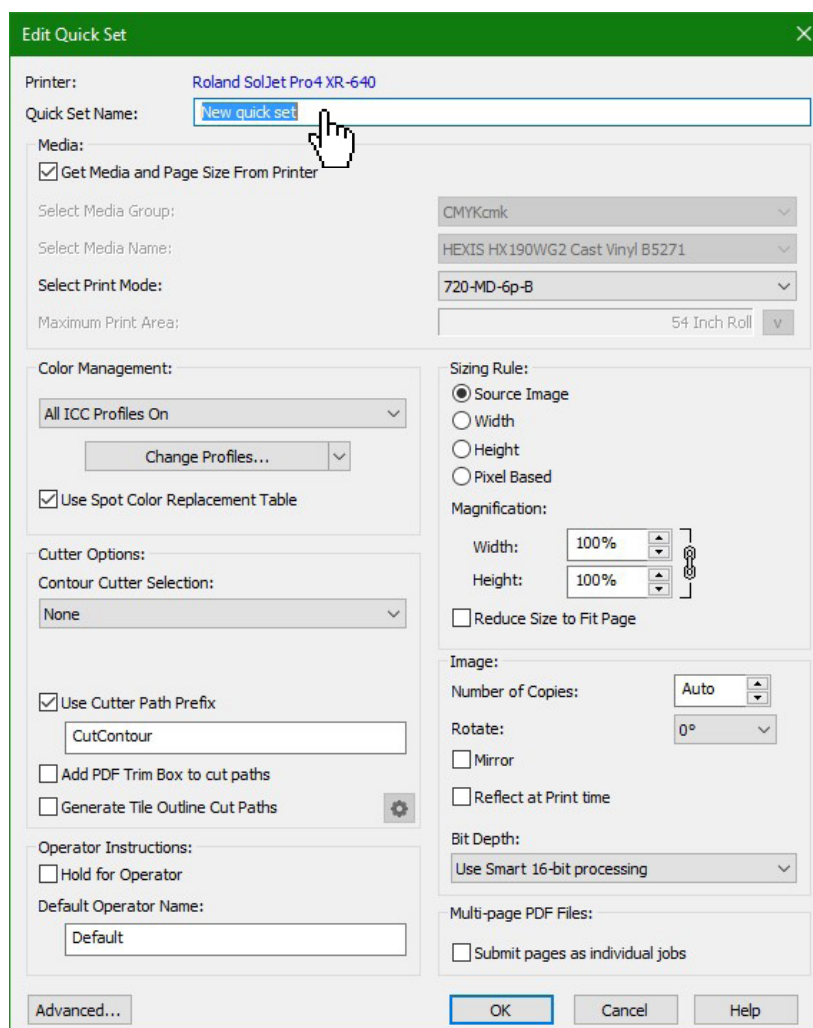http://www.hexis-graphics.com/en/supports/

2. Default Setting of a Quick Set

Open the «**Configure Printer**» window.
If an error message appears, restart Onyx in administrator mode and then open again this window.

Under the Quick Set tab, click «**New**» and then name it.

2.1.Colour management setting

2.1.1.   Selecting the media profile

Identify the printing media which matches your **main HEXIS media used** in the «**Media Group**» and «**Media Name**» drop-down lists.

2.1.2.   Selecting the printing mode

Select **the resolution**, **printing direction** and **number of runs** that best suit your printing constraints **in terms of productivity and quality**.

Resolution	Advantages	Disadvantages
Low	• High printing speed • Low ink consumption	• Limited colour range • Poor quality of flat tints • Low detail accuracy • Poor printing stability
High	• Maximum colour range • High quality of flat tints • Detail accuracy • High printing stability	• High ink consumption • Low printing speed

Printing in 540x720

Printing in 720x1440

| Number of runs	Advantages	Disadvantages
Few	• Higher printing speed	• Poor quality of flat tints • Limited colour range
Many	• High quality of flat tints • Accuracy of the colorimetric rendering • Drying time more adapted	• Lower printing speed

Printing in six runs

Printing in twelve runs

| Printing direction	Advantages	Disadvantages
Unidirectional	• Detail accuracy (text, etc.) • High quality of flat tints • Drying time more adapted	• Printing speed approximately divided by 2
Bidirectional	• High printing speed	• Require a precise bidirectional alignment of the heads Sensitivity to media buckling • Quality almost always lower than that of the unidirectional one
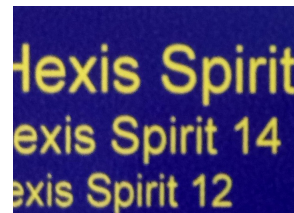
Unidirectional printing
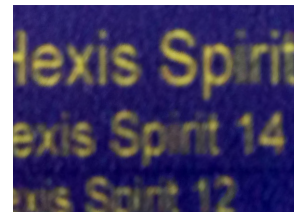
Bidirectional printing

In Onyx, the choice of **«printing mode»** comprises these parameters.
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A **low-quality fast printing** will further promote **the appearance and perception of defects related to the state and setting of the machine** (clogged nozzles, bad print heads' alignment, etc.) than a **high-quality slow** printing.

2.1.3. *Configuring the input ICC profiles and colorimetric rendering*

Click the «**Change Profiles**» icon in the «**Colour Management**» tab to select **the input ICC profiles** and **the colorimetric rendering intents** according to your work habits.
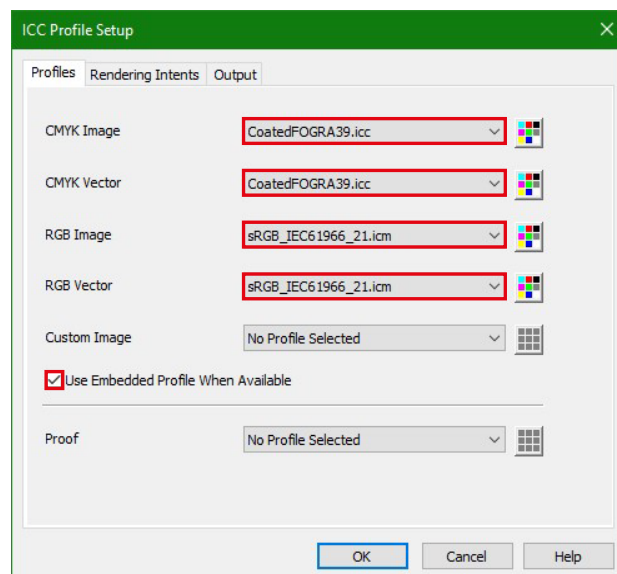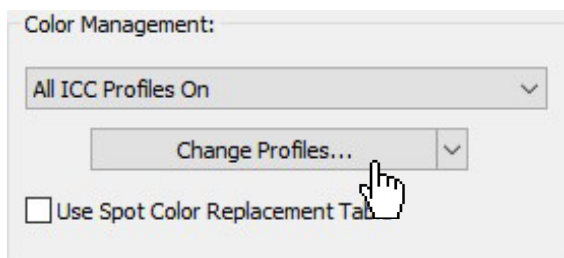
By default, HEXIS recommend to use the **sRGB** in RVB and **CoatedFOGRA39** in CMJN because these are **the most current standard profiles**. In the «**Rendering Intents**» tab, HEXIS further recommend to print with **the perceptual colorimetric rendering**.
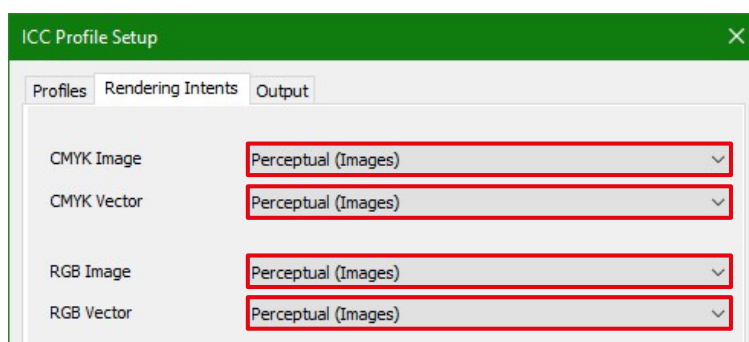
Additional options

When configuring the input ICC profiles, Onyx presents two additional options:

Function «ICC Pure Hues»

When this box is checked, **each pure CMJN colour** in your file is excluded from **the colorimetric ICC conversion**.
Example: A 70 % black will be printed only with black ink, a 30 % yellow only with yellow ink.

This can be particularly useful for **delicate letterings** and **barcodes** when you want to **avoid lags between cyan, magenta, yellow and black**.

Function «Use Embedded Rendering Intent When Available»

Check the case «**Use Embedded Rendering Intent When Available**» in order to **preserve the input profile contained in the original image** to the detriment of the settings carried out in the «Profiles» section. The advantage of this tool is to **preserve the colorimetry of the original file** by avoiding an erroneous interpretation of the numerical values of the file.

For more information on these options, please refer to the Product Bulletin No.3: «Introduction to colour management».

2.2.Using spot colours

Spot colours are used to print **the colours of an image related to certain references colorimetrically as close as possible**.
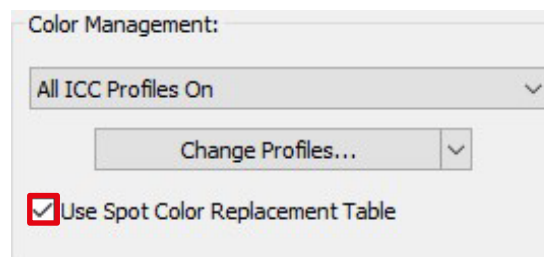

To **activate this option and the printing of referenced colours** on your image in spot colours, check the case «**Use Spot Colour Replacement Table**» and activate **the absolute matching method**.
(Please refer to the Onyx user manual for versions prior to Onyx V.12.)

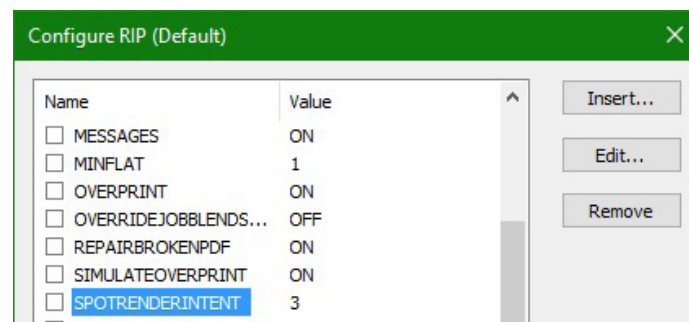Enabling the «absolute» matching method for spot colour printing:

1. Click the «**Setup**» tab.
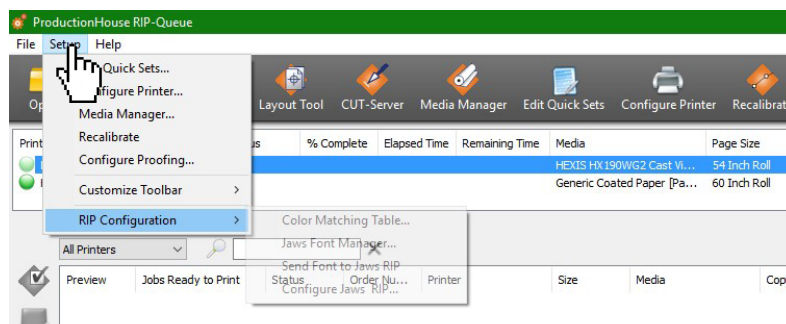
2. Choose the «**RIP Configuration**» menu, then «**Configure Jaws RIP**».
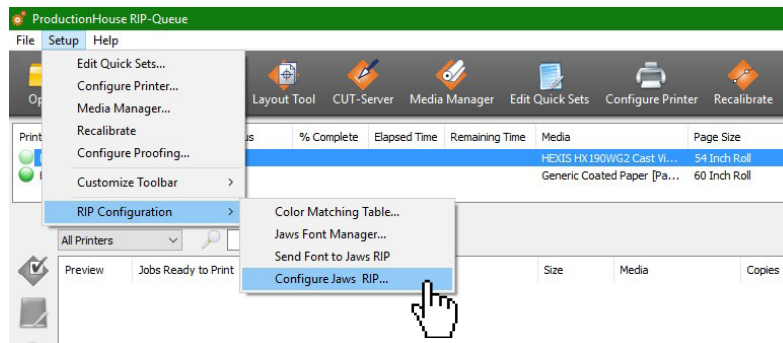
3. Verify that the «**SPOTRENDERINTENT**» option is unchecked.

Some spot colours may not be printable by your machine; this means that the printed colour does not match the referenced one, mainly because of **the limited reproduction space of your printer**.

For more information, please refer to the technical data sheet no.3: «Introduction to colour management».

Quick Set Registration

Click «**Ok**». The configuration is visible in the Quick Set list.

Select the created Quick Set when you import an image so that the configuration is applied to it by default.
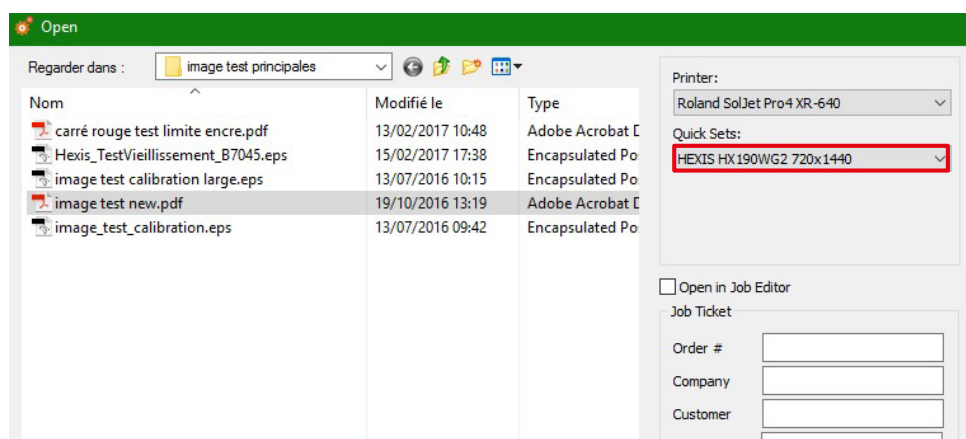
When using another HEXIS printing media for example, you can easily change the media profile by opening your image in the «Job Editor», and adjust the resolution, number of runs and printing direction according to your printing purposes.

2.3.«Machine» settings

For more information on the printer calibration, please refer to the technical data sheet no.2: «Setting up your printers according to your HEXIS media».

Some printer settings can be **controlled at the RIP level**. You can choose which settings are used: those set on the **printer** or those originated from the **media profile**; otherwise you can directly **customise** them.

Select the image to print, then right-click.
In the «**Edition**» tab, choose «**Printer Settings**».
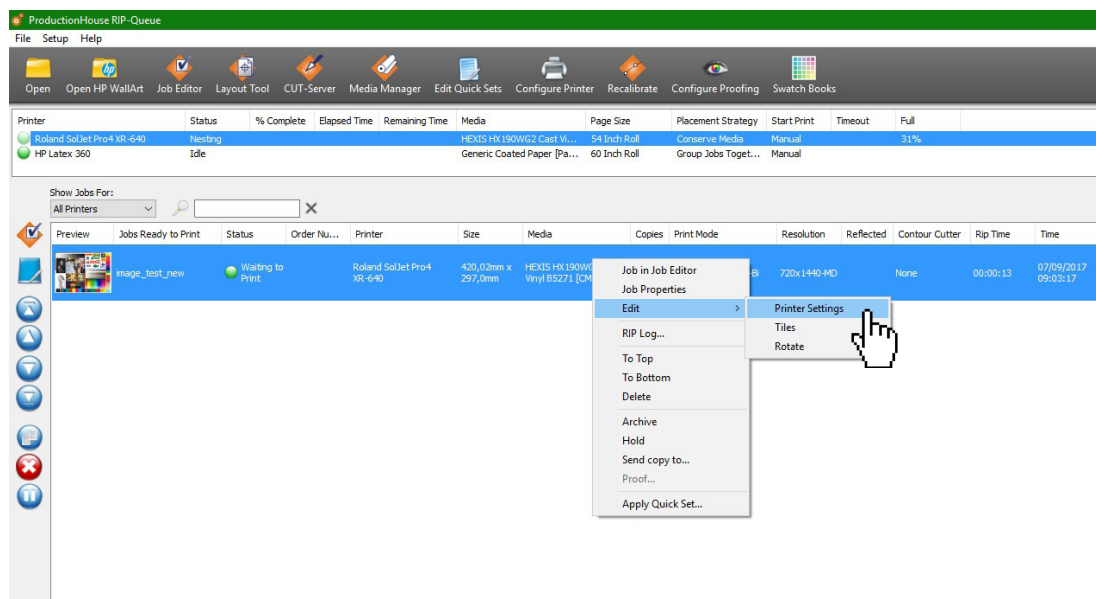
The printer setting values on this window (feed, suction, heating temperature, etc.) can be **changed** by checking the boxes related to these settings.
When printing, **the entered data will be taken into account for the benefit of those originated directly from the machine**.

2.3.1.   *Feed Calibration Control*

Since the feed value is different at the beginning and at the end of the roll, HEXIS recommend to calibrate this setting directly on your machine, and to verify that the «**Panel Setting**» command in the calibration section is checked.

2.3.2.   *Heater Control*

When downloading the media profile on the HEXIS website, **the temperatures corresponding to the media are entered.**
[1]

HEXIS recommend using the heating temperatures of the profile, by unchecking the boxes corresponding to the temperatures of the different heating plates.
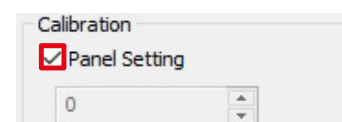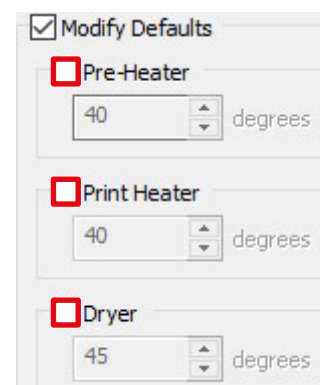
However, these temperatures can be modified by the user depending on the surrounding temperature and humidity conditions.
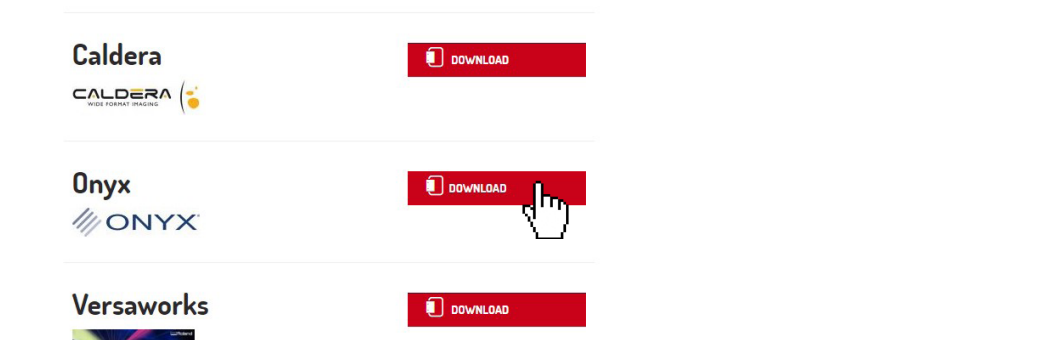
3. How to print Pantone, Ral or HEXIS colours.

Some libraries are already embedded in Onyx, but other ones can be added.
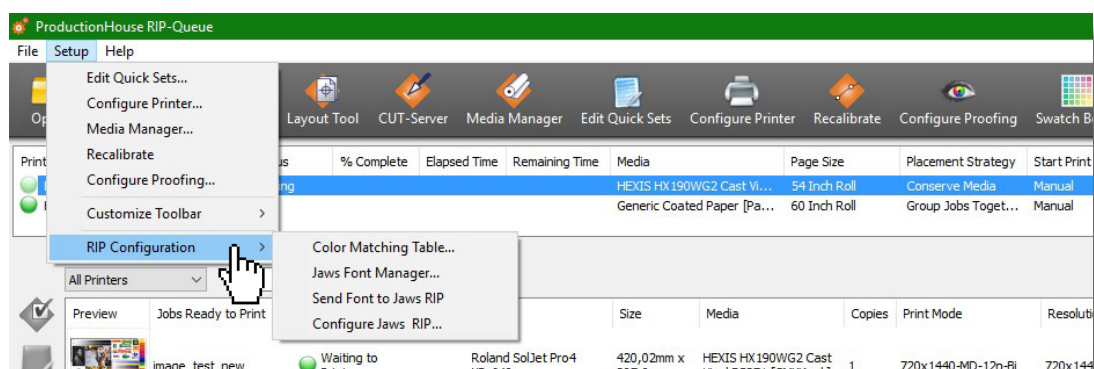
3.3.1. Importing the HEXIS colour library into Onyx

1. Go to the HEXIS website: http://www.hexis-graphics.com
2. Under the «**Professionals**» tab, select «**Colour Palettes**».
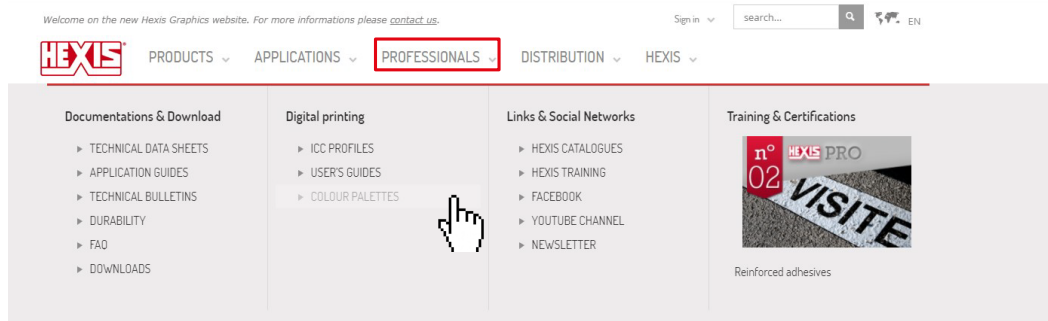
3. Download **the HEXIS library** for Onyx.

4. Launch Onyx.
5. Click the «**Setup**» tab, **then** «**RIP Configuration**».
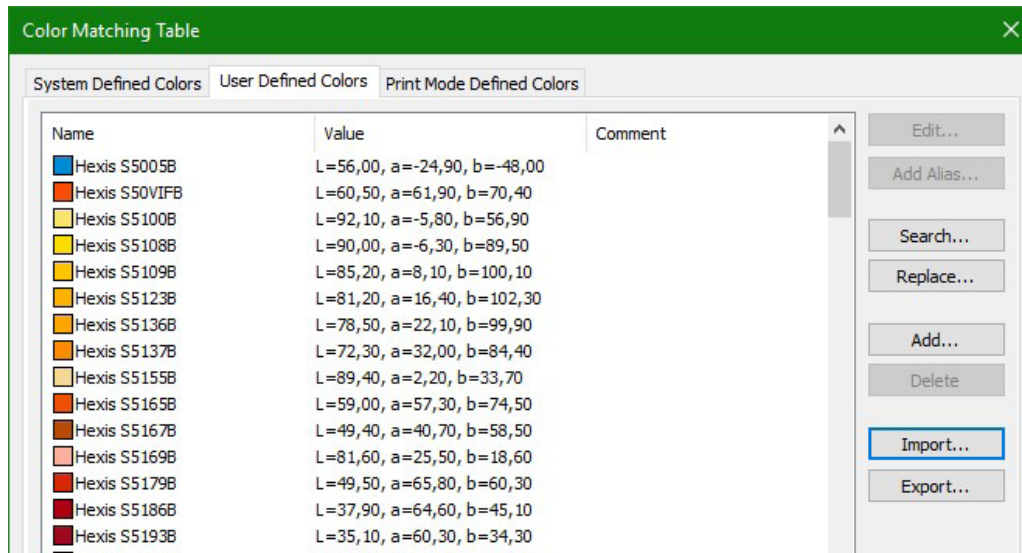
6. Select «**Colour Matching Table**».
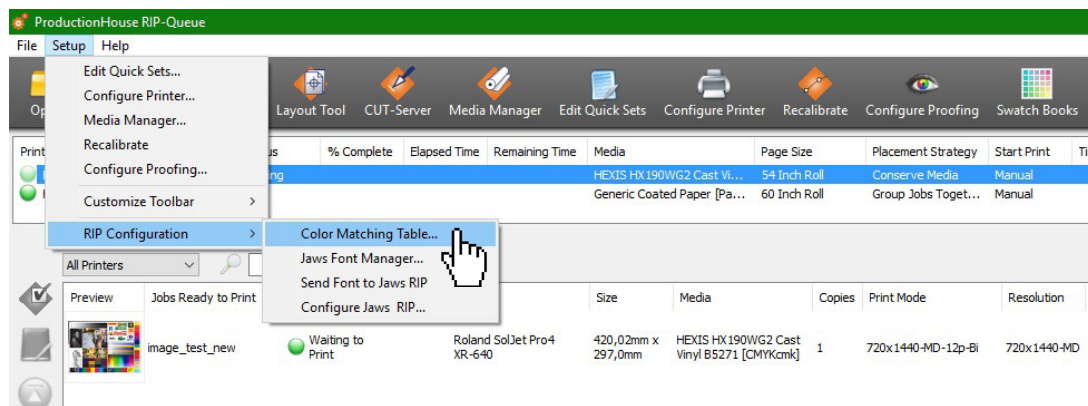
7. In the «**User Defined Colours**» tab, click «**Import**».
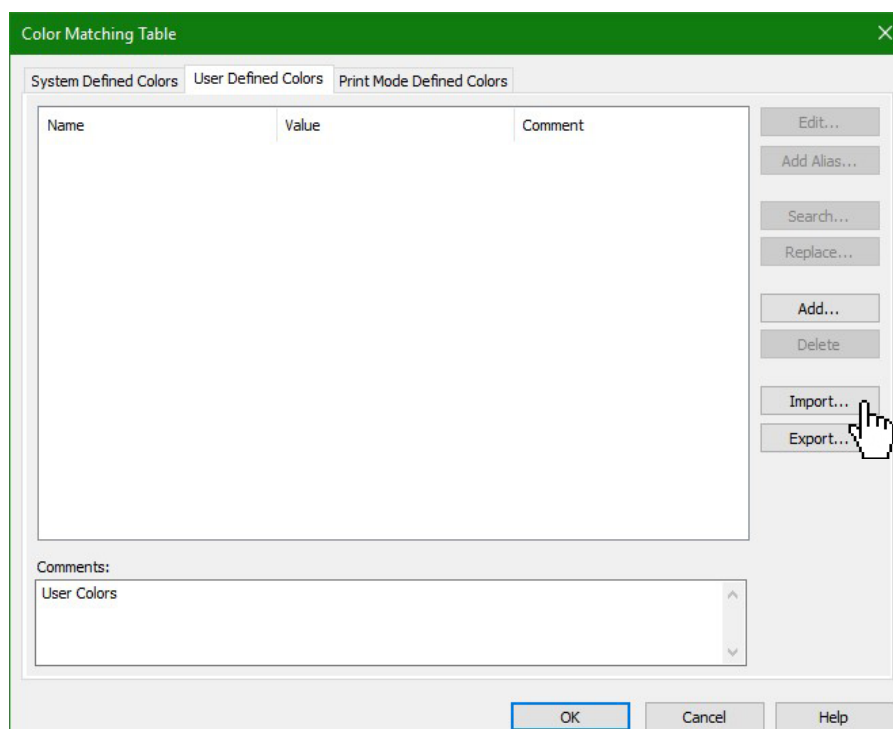
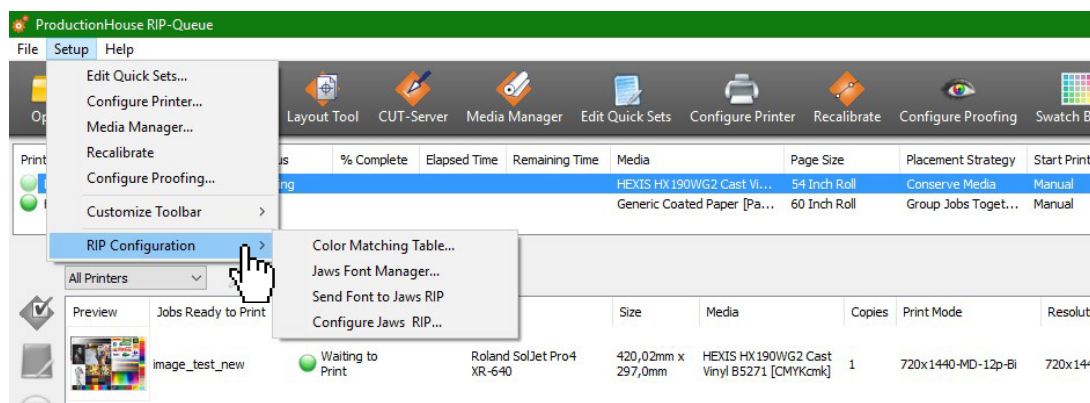8. Select «**Suptac library**» for example, then click **OK.**
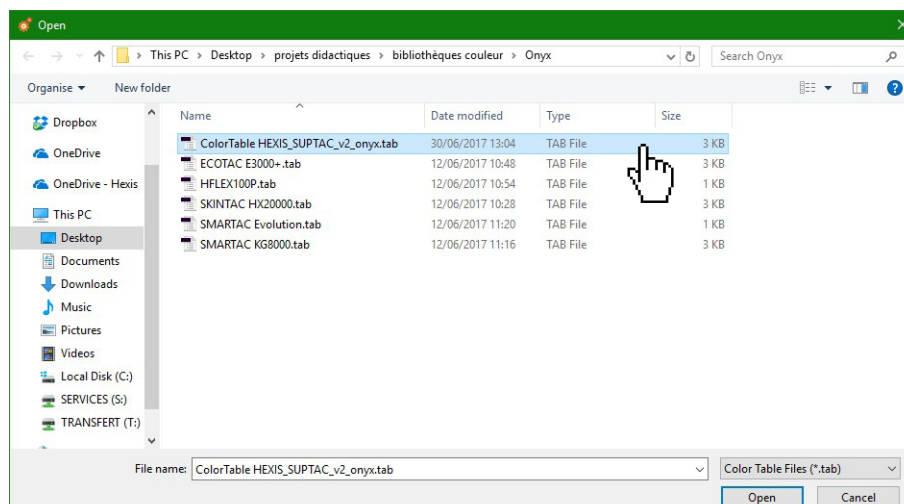
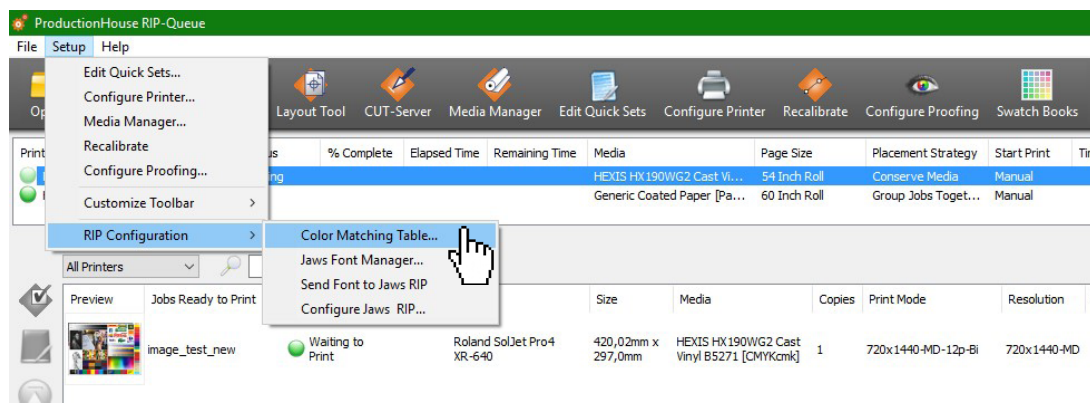9. Check if the Suptac library is taken into account.
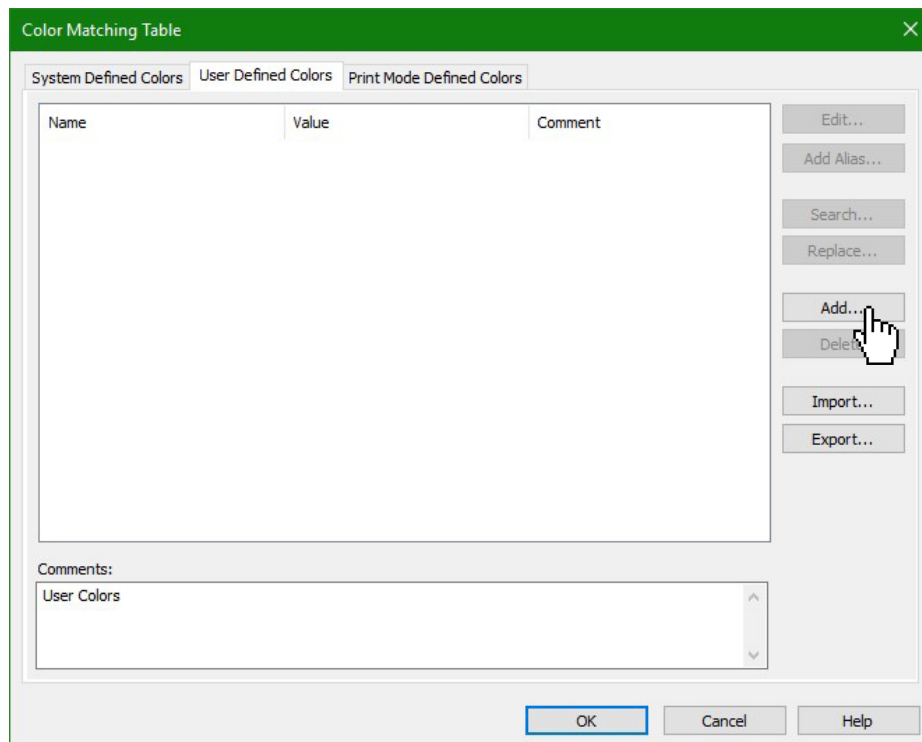

3.3.2. Creating a swatch in Onyx

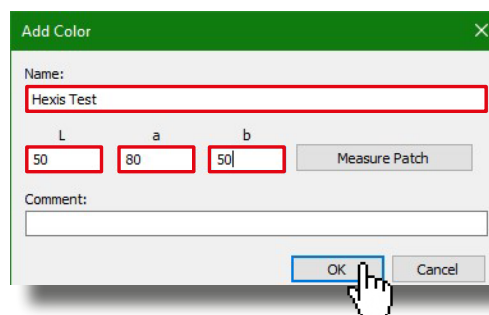1. Click the «**Setup**» tab, **then** «**RIP Configuration**».

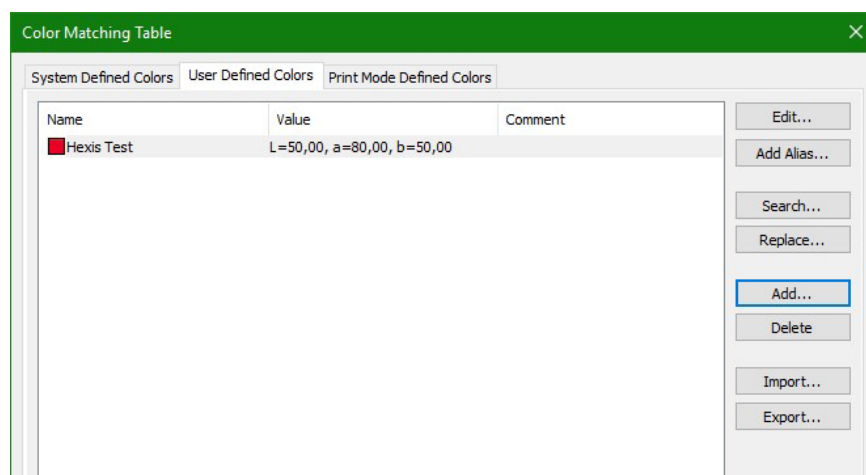2. Select «**Colour Matching Table**».

3. In the «**User Defined Colours**», click «**Add**».

4. Enter the name and LAB values of this swatch. Click «**OK**». Measure the reference colour to be reproduced using a spectrophotometer.
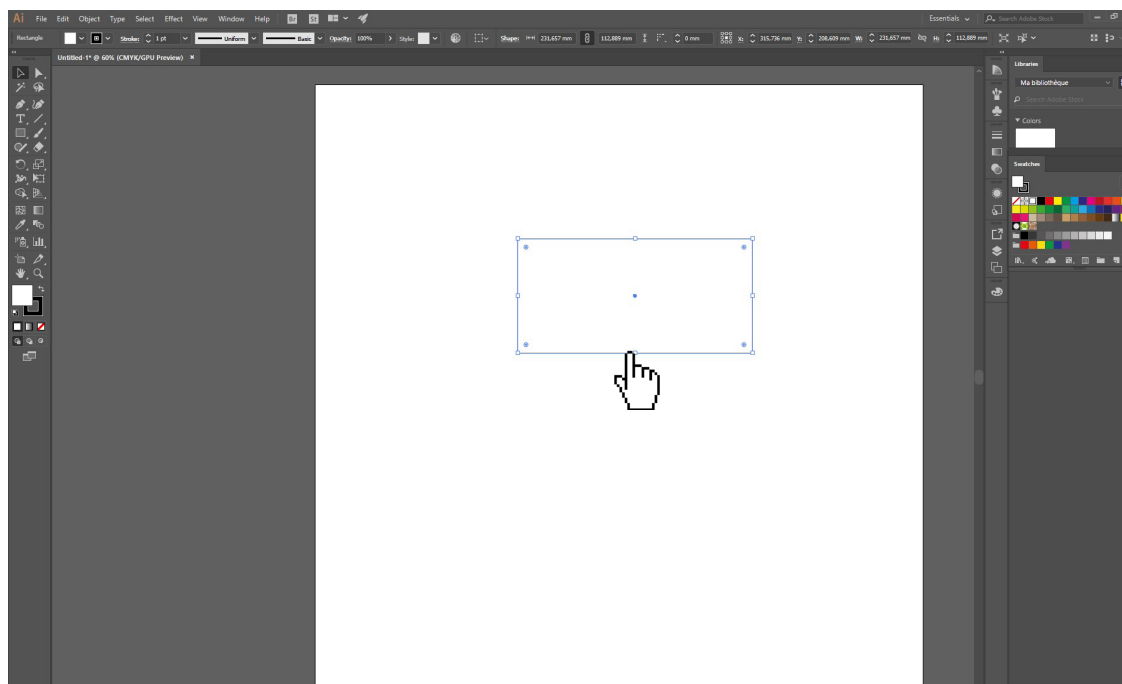

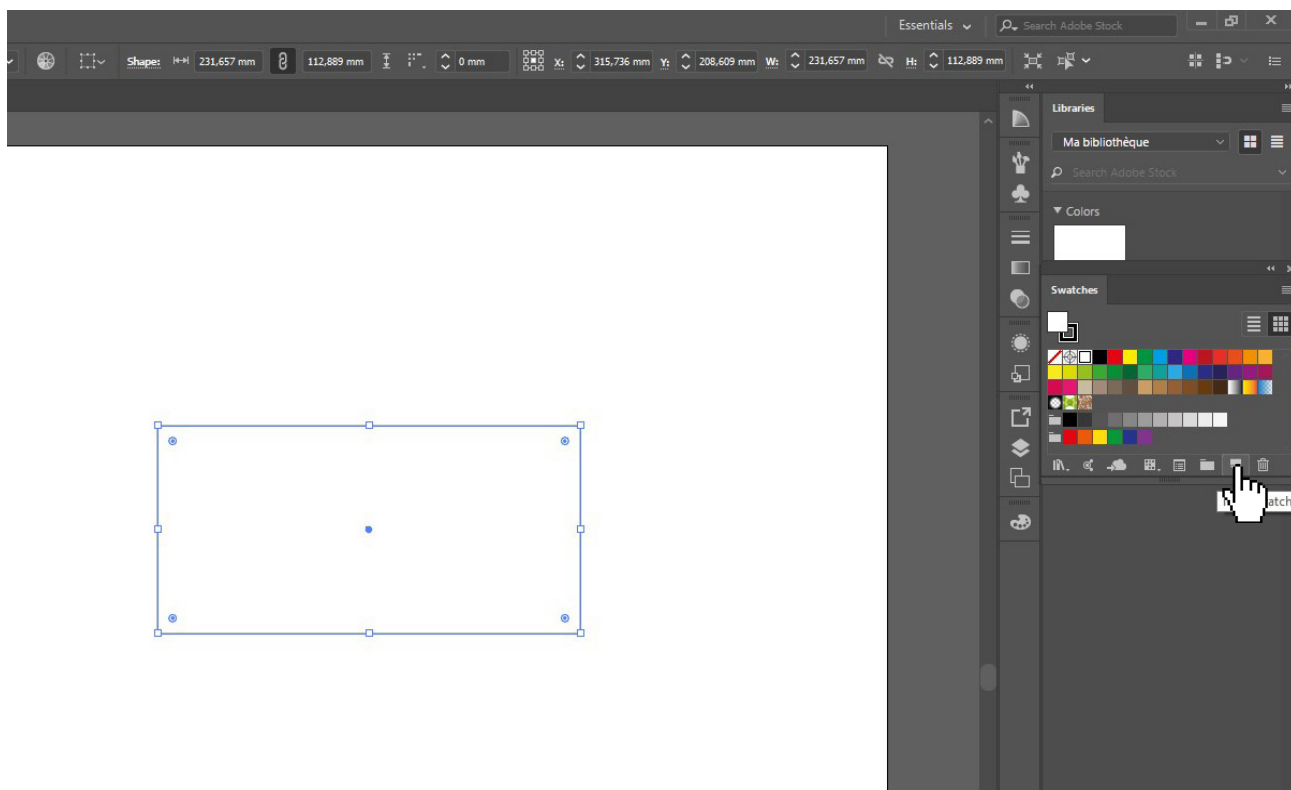5. Check if the created colour is taken into account.

3.3.3.   Creating a colour that matches a referenced value in Onyx under Illustrator.
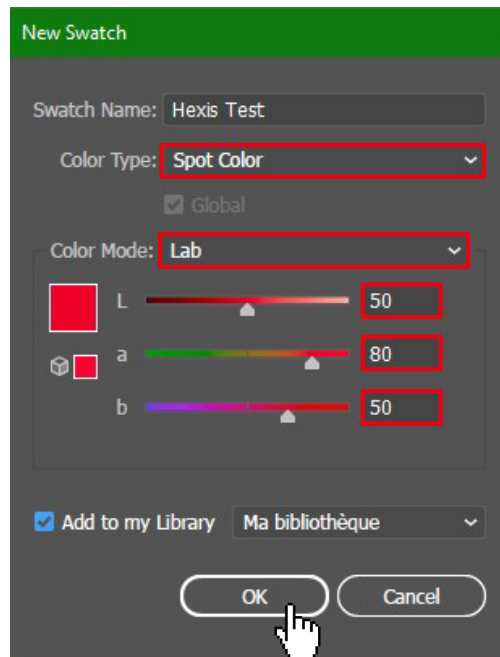
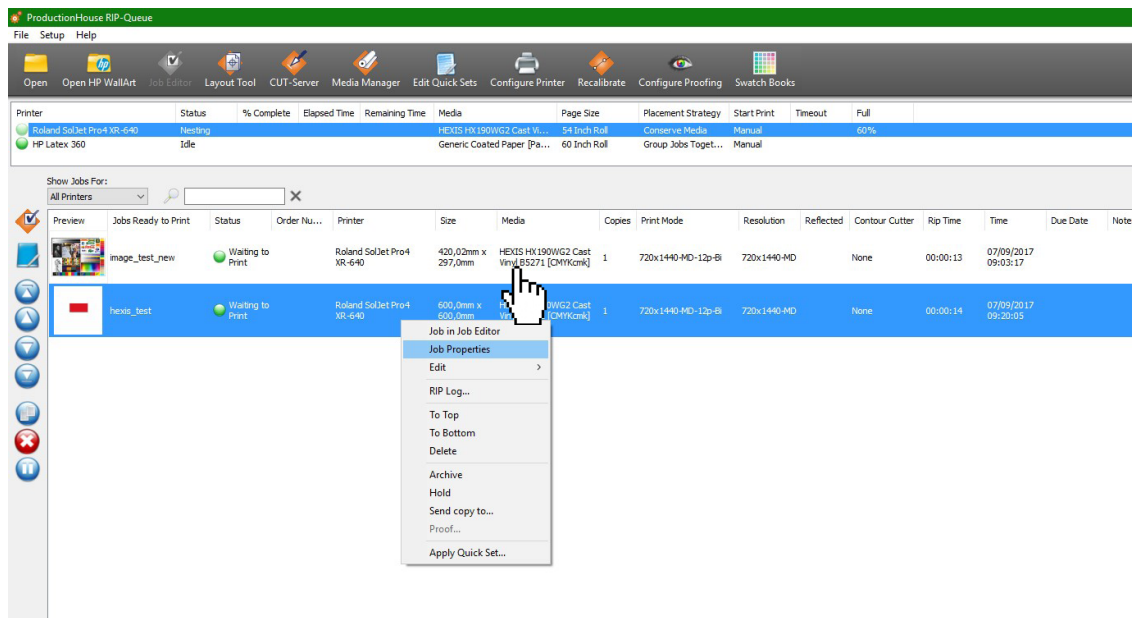1.   Select **the image**.

2.   Click the «**New Swatch**» button.

3. Enter exactly **the same swatch name** than that in Onyx.
4. Select «**Spot Colour**».
5. Reference **the LAB values** matching the desired visualisation colour.

6. Click «**OK**».
7. Save the file.
8. Open **the image** in Onyx.
9. Right-click, then select «**Job Properties**».

10. In the «**Named Colours**» tab, check if the spot colours are taken into account.